

ROYAL ASTRONOMICAL SOCIETY.

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CAPT. W. H. SMYTH, Vice-President, in the Chair.

The late Dr. Pearson bequeathed to the Society all the stock of *Introduction to Practical Astronomy* remaining unsold at his death. There are about 100 copies of the entire work, and 400 copies of the first volume, which contains the tables.

The Council have resolved to sell these at the following prices to fellows and associates of the Society :—

	£	s.	d.
The whole work, 2 vols. text, and 1 of plates	1	1	0
The 1st vol., containing all the tables	0	5	0
The price to non-members is double.			

It is desirable that those fellows who wish to purchase the work should give immediate notice to the Assistant-secretary.

FLORA.

Observations compared with Mr. Hind's Ephemeris in the *Monthly Notices*, Nos. 2 and 3 of Vol. VIII.

CAMBRIDGE.			On the Meridian.			(Professor Challis.)			
Greenwich M.T.			R.A.		Obs ^d —Cal ^d	N.P.D.		Obs ^d —Cal ^d	
1848.	h	m	s	h	m	s	°	'	"
Jan. 4	9	15	22.9	4	10	13.43	+0.07	73	55 9.0
5	9	11	14.5	10	0	0.88	+0.27	49	58.3
11	8	47	12.0	9	33	78	—0.23	73	17 10.1
15	3	1	57.5	10	3	06	+0.17		
16	8	28	14.4	10	15	84	+0.03	72	48 22.6
Feb. 1	7	33	30.0	18	27	35	—0.62		
2	7	30	21.2	4	19	14.59	—0.61		

With the Northumberland Equatoreal.

1848.	Greenwich M.T.			R.A.			Obsd—Cal ^d	N.P.D.			Obsd—Cal ^d	No. of Comps. Star.		
	h	m	s	h	m	s		°	'	"		R.A.	N.P.D.	
Feb. 16	7	31	53.7	4	33	12.62	—0.61	69	38	33.0	—1.8	1	1	<i>a</i>
	8	3	27.1			13.92	0.86			31.3	+4.3	9	9	<i>b</i>
	8	31	54.9			15.34	0.83			24.4	+4.5	1	1	<i>c</i>
17	7	49	47.9	34	24	35	—0.97	32	42	4	+7.6	1	1	<i>c</i>
	8	1	30.9	34	26	28	+0.38			26.3	—5.6	3	3	<i>d</i>
18	7	20	48.3	35	36	80	+0.41	69	26	44.3	—4.3	6	6	<i>d</i>
25	8	19	1.5	44	42	22	—1.03	68	46	36.8	—1.2	6	6	<i>e</i>
28	10	31	22.3	49	1	51	0.66	29	50	4	+2.4	6	6	<i>f</i>
Mar. 3	10	42	10.8	4	54	52.24	1.19	68	8	48.1	—2.4	7	7	<i>f</i>
10	8	32	17.5	5	5	36.15	1.02	67	35	11.9	5.9	9	9	<i>g</i>
14	9	6	45.3	12	10	94	0.97	17	13	7	12.6	8	8	<i>h</i>
18	9	24	9.3	18	57	40	1.04	67	0	43.3	15.8	6	6	<i>i</i>
20	8	8	36.9	22	18	51	1.55	66	53	21.3	9.0	1	1	<i>j</i>
	8	40	43.5			21.15	1.24			12.6	12.7	12	5	<i>k</i>
21	8	7	50.0	24	3	19	1.38	49	45	1	3.0	1	1	<i>j</i>
	8	26	41.2			4.61	1.33			28.7	16.5	10	10	<i>k</i>
28	7	46	5.4	36	32	43	0.70	26	24	4	—8.2	2	2	<i>l</i>
29	8	27	22.7	38	24	81	1.10	23	35	4	+4.4	8	8	<i>m</i>
April 1	8	9	23.9	43	56	10	0.75	15	17	5	—2.3	9	6	<i>n</i>
6	9	30	53.3	5	53	26.75	0.97	66	3	28.2	—5.7	7	7	<i>o</i>
10	10	42	42.1	6	1	12.71	0.75	65	56	9.7	+4.1	7	7	<i>p</i>
14	8	20	5.2	8	47	42	0.93	50	22	4	—12.0	9	9	<i>q</i>
17	8	45	2.8	14	43	32	0.59	47	17	3	9.7	2	2	<i>r</i>
	8	48	12.2			43.50	0.66			17.9	9.0	9	9	<i>s</i>
19	9	2	24.3	18	41	61	0.95	45	41	0	15.0	1	1	<i>t</i>
	9	12	49.9			42.63	0.82			41.3	14.2	8	8	<i>u</i>
28	8	55	38.6	36	42	74	0.54	44	31	1	9.8	10	5	<i>v</i>
	8	55	38.6			42.34	0.94			27.0	13.8	10	6	<i>w</i>
29	8	27	59.7	6	38	41.80	0.47	65	44	55.2	10.8	2	2	<i>x</i>
	8	53	54.6			43.90	—0.56			53.1	—13.4	7	7	<i>v</i>

“The observed places are corrected for refraction and parallax, and the calculated places for aberration.

“The mean places of the following reference stars were derived from the authorities cited below, by applying the annual and secular variations. Where two authorities are mentioned, the mean of the two results is adopted :—

<i>a</i> ... B.A.C. 1417	<i>g</i> ... B.A.C. 1620	<i>o</i> ... { H.C. 11356 B.Z. 348 : 5 ^h 50 ^m 17 ^s
<i>c</i> { H.C. 8705 B.Z. 343 : 4 ^h 27 ^m 33 ^s	<i>j</i> ... H.C. 10208	<i>p</i> ... B.A.C. 1981
<i>d</i> ... H.C. 8798	<i>l</i> ... B.A.C. 1801	<i>q</i> ... B.A.C. 2011
<i>e</i> ... H.C. { 9228 9229	<i>m</i> { H.C. 10844 B.Z. 348 : 5 ^h 34 ^m 46 ^s	<i>r</i> ... B.A.C. 2042
<i>f</i> ... B.A.C. 1551	<i>n</i> { H.C. 11048 B.Z. 348 : 5 ^h 40 ^m 4 ^s	<i>t</i> ... B.Z. 348 : 6 ^h 14 ^m 7 ^s

"The star α is B.A.C. 2238, the adopted mean place of which, 1848.0, as determined by one transit and two circle observations in 1847, is R.A. $6^h 42^m 46^s.01$, N.P.D. $66^\circ 13' 25''.4$.

"The remainder are unknown stars, the following adopted apparent places of which, obtained by one, or at most by two, equatorial comparisons with the known stars, can only be regarded as approximate:—

Star.	Apparent R.A. h m s	Apparent N.P.D. ° ' "	By Comparison with
<i>b</i>	4 32 26.64	69 41 49.7	H.C. 8705
<i>h</i>	5 11 35.04	67 19 56.5	B.A.C. 1620
<i>i</i>	5 18 7.33	67 1 44.5	H.C. 10208
<i>k</i>	5 21 51.77	66 54 38.7	— —
<i>s</i>	6 13 58.77	65 48 16.2	B.A.C. 2042
<i>u</i>	6 17 44.43	66 11 9.9	B.Z. 348, $6^h 14^m 7^s$
<i>v</i>	6 36 20.58	65 43 19.8	B.A.C. 2238
<i>w</i>	6 37 13.04	65 45 30.0	— —

MARKREE. Meridian Circle. (E. J. Cooper, Esq. & Mr. Graham.)

	Greenwich M.T. 1847. d	R.A. h m s	Decl. ° ' "	Parallax.
Nov.	17.569130	4 51 40.14	+ 13 47 9.0	+ [9.810] <i>p</i>
	25.541658	43 32.45	13 53 22.1	9.809
	30.524187	38 1.65	14 0 34.0	9.808
Dec.	3.513676	34 40.71	14 6 6.9	9.807
	18.462247	19 33.41	14 48 53.2	9.800
	20.455666	17 56.35	14 56 25.5	9.800
	30.424155	11 51.88	15 39 54.0	9.792
1848. Jan.	3.412267	10 28.25	15 59 42.3	9.788
	5.406488	10 0.68	16 10 4.2	9.787
	11.389680	9 34.29	16 42 49.3	9.781
	14.381822	9 52.68	16 59 59.5	9.779
	15.379396	10 3.24	17 5 48.1	9.778
	19.369046	11 8.54	17 29 30.8	9.774
	24.356887	13 17.89	17 59 53.0	9.768
	25.354526	13 50.02	18 6 0.6	9.767
	28.347583	15 38.09	18 24 34.6	9.764
	31.340835	17 43.22	18 43 12.2	9.761
Feb.	12.315677	28 42.16	19 57 9.0	9.747
	15.309798	32 2.66	20 15 13.3	9.744
	25.291212	44 37.85	21 12 53.0	9.733
	26.289433	4 46 0.28	+ 21 18 23.0	+ [9.732] <i>p</i>

NOTES.

1848.
Jan. 11. Bad illumination; observation uncertain in consequence. Got 5 wires.
15. Got but 4 wires. Clouded at first three.
19. Very faint. Seen through clouds.
25. A $9\frac{1}{2}$ mag. star (same declination) about 15^s following.
Feb. 25. Very faint.

Equatoreal and Square-bar Micrometer.

Greenwich M.T.		R.A.			Parallax.	Decl.			Parallax.
1847.	d	h	m	s		°	'	"	
Oct.	27	49	31	96	5 3 52.43 — [8.498] <i>p</i>	+ 13	54	44.5 + [9.843] <i>p</i>	
Nov.	2	60	65	46	2 5.93 [7.437]	13	49	43.9	9.810
	5	48	14	21	5 0 43.81 [8.461]	13	48	4.4	9.837
	17	47	04	84	4 51 46.70 [8.371]	13	47	11.8	9.827
	19	48	97	89	49 49.73 [8.251]	13	48	4.1	9.819
	25	49	69	86	43 35.23 [8.048]	13	53	25.1	9.813
	27	42	41	33	41 29.05 — [8.324]	13	55	47.0	9.822
1848.									
Feb.	2	41	34	64	19 19.11 + [8.286]	18	55	59.1	9.776
	9	36	62	18	25 37.55 [8.061]	19	39	6.0	9.757
	11	50	06	94	27 48.56 [8.580]	19	52	6.1	9.832
	17	46	11	66	34 33.83 [8.540]	20	27	58.6	9.808
	18	48	43	96	35 47.74 [8.579]	20	34	2.1	9.826
	28	39	90	10	48 58.49 [8.440]	21	29	50.5	9.771
March	1	40	29	94	4 51 50.79 [8.463]	21	40	27.3	9.774
	7	34	19	41	5 0 49.66 [8.254]	22	10	14.3	9.739
	24	41	29	96	29 29.41 [8.568]	23	21	5.0	9.796
	25	38	89	64	31 14.07 [8.527]	23	24	17.2	9.777
	27	41	31	43	34 53.05 [8.576]	23	30	33.2	9.800
	28	38	89	62	36 39.58 [8.537]	23	33	35.8	9.779
	30	42	99	34	40 24.07 [8.602]	23	39	22.4	9.817
	31	50	74	38	42 23.78 [8.624]	23	42	24.0	9.891
April	8	45	13	71	5 57 21.60 [8.627]	24	0	34.4	9.848
	10	44	47	93	6 1 12.83 [8.626]	24	3	57.2	9.848
	13	41	28	16	6 57.87 [8.607]	24	8	18.9	9.818
	24	44	14	95	29 48.65 [8.632]	24	15	51.4	9.857
	25	44	19	03	30 48.93 [8.632]	24	15	57.0	9.859
	26	40	94	92	32 45.29 [8.619]	24	16	1.5	9.830
	29	41	52	26	6 38 49.76 + [8.625] <i>p</i>	+ 24	14	57.8 + [9.892] <i>p</i>	

Stars of Comparison and Notes.

1847.				
Oct.	27	Bessel	v. 54	Sixteen comparisons.
Nov.	2	—	11	Eleven comparisons.
	5	—	11	H. C. 9671, 9714.
	17	—	iv. 1199	H. C. 9417. <i>Flora</i> appears to have occulted a minute star about the time of culmination.
	19	—	1081, 1086, 1096.	Weisse gives for the right ascension of this last 4 ^h 48 ^m 27 ^s .63; it should be 4 ^h 48 ^m 26 ^s .63, as I have taken it in the reduction. Baffled by clouds. Instrument greatly shaken by wind.
	25	B.A.C.	1500	H. C. 9074.
	27	—	—	Do.
1848.				
Feb.	2	—	1376	The instrument was greatly shaken by the wind, and I fear even moved in right ascension: so that there is little confidence to be placed in this observation.
	9	—	1417	Piazz1 v. 119, 120.
	11	—	—	The planet is becoming much fainter. This night I estimate it at not more than 9½ magnitude. Strong moonlight, however.

1848.
Feb. 17 B.Z. 343 ; $4^h 32^m 22^s \cdot 00$. H. C. 8844. *Flora* rapidly diminishes in magnitude. It cannot to-night be more than 10^m .
- 18 — — Another star, H.C. 8798, with which the planet was compared, gives for the planet's place—
 $4^h 35^m 50^s \cdot 12 + 20^\circ 34' 18'' \cdot 2$
 It was judged safer to adopt the former determination from a star in which Lalande and Bessel agree so closely.
- 28 B.Z. 393 ; $4^h 45^m 41^s \cdot 03$. H. C. 9228, 9229. Four comparisons. Clouds and wind. The latter, it is to be feared, affected the observation.
- March 1 B.A.C. 1551.
7 B.Z. 334 ; $5^h 0^m 35^s \cdot 20$. The star B.Z. 334, $5^h 0^m 33^s \cdot 71$, was also taken at the same time. It gives for the planet—
 $5^h 0^m 48^s \cdot 65 + 22^\circ 10' 16'' \cdot 0$
 The former star was much more favourably situated for the comparison : and we therefore inserted in the text the result from it, instead of taking a mean. Nine comparisons. Planet $10\frac{1}{2}$ magnitude. There was a haze which rendered the planet barely visible. Cannot depend on this observation.
- 24 B.A.C. 1774.
25 B.A.C. 1774 B.Z. 521 ; $5^h 31^m 8^s \cdot 20$.
27 B.Z. 348 ; $5^h 34^m 35^s \cdot 74$, and $5^h 34^m 46^s \cdot 34$.
28 Same stars.
30 B.Z. 348 ; $5^h 37^m 26^s \cdot 60$, and $5^h 37^m 22^s \cdot 30$.
31 — — $5^h 37^m 26^s \cdot 60$. Two comparisons. Very low, and very faint. Lost in cloud after two comparisons.
- April 8 H. C. 11589. Near the moon. Very faint. Cannot depend on this observation.
- 10 B.Z. 348 ; $6^h 2^m 55^s \cdot 40$, and $6^h 2^m 55^s \cdot 99$. Five comparisons. Strong moonlight. Light clouds. Planet faint.
- 13 B.A.C. 2011, B.Z. 348, $6^h 4^m 36^s \cdot 30$. Eight comparisons.
- 24 B.Z. 348 ; $6^h 27^m 4^s \cdot 16$. The star and planet were unfavourably posited for comparison.
- 25 Same star. Five comparisons. Interrupted by clouds.
- 26 B.Z. 348 ; $6^h 33^m 0^s \cdot 79$
29 — — $6^h 36^m 45^s \cdot 93$
- When not otherwise mentioned in the notes ten comparisons were made in each observation.

ASTRÆA.

SOUTH VILLA. Equatoreal. (MM. Bishop and Hind.)

1848.	G.M.T. h m s	R.A. ° ' "	Decl. ° ' "
June 29	12 47 13	328 56 5'1—0°402 p	—11 27 35'2+0°861 p
30	12 18 43	328 52 36'2—0°452 p	—11 29 47'7+0°853 p

“An ephemeris will appear in the *Berliner Jahrbuch* for 1851. The planet has just become visible in the morning, and we have with great difficulty obtained the following observations. The planet is not brighter than a star of the 12th magnitude.

“It is hoped that an ephemeris of *Hebe* will be ready before she can be observed.